ores. An interesting and valuable paper by Dr. Paul D. Merica[5] describes the uses of nickel and nickel alloys.

Dr. J. F. Wright[1] presents a description of deposits of pyrrhotite, pentlandite and chalcopyrite occurring in the Oiseau River area, Manitoba. The ore consists of small lenses occurring in sheer zones in andesite lava along an andesite-peridotite and andesite-granite contact never more than 300 feet from the peridotite masses.

Petroleum.—A report by Dr. G. S. Hume[1] on the Wainwright oil field presents a description of the sedimentary formations exposed on the surface and penetrated by boring. The structural features, as determined from surface outcrops and from the logs of wells, are described and indicated on an accompanying map. The results of borings made for petroleum on Peace and Athabaska rivers in northern Alberta are described by Dr. R. T. Elworthy[2].

Silver.—The results of detailed field and laboratory investigations into the geology and ore deposits of the Premier mine, British Columbia, are presented by W. D. Burton[7]. The country rock consists of granodiorite, porphyry and andesitic tuff or a near-surface intrusive of andesite. These rocks have been intensely altered and somewhat sheared, and are intruded by the granodiorite of the Coast Range batholith. The veins were formed chiefly by replacement of the rocks in the vicinity of fracture zones. There were two distinct periods of replacement: (1) Replacement, preferably of the porphyry, by quartz, adularia, and pyrite with some sericite and chlorite; (2) Replacement of these minerals by sphalerite, galena, tetrahedrite, chalcopyrite, electrum, argentite, pyrargyrite and polybasite, deposited in successive but over-lapping periods. Considerable supergene enrichment took place in the upper 650 feet in the vicinity of fractures, with deposition of native silver and polybasite. The higher gold values near the surface are regarded as due to the vertical zoning of primary gold, probably as electrum, rather than to supergene gold enrichment.

The Matabitchuan area, in eastern Ontario, is, according to E. W. Todd[3], underlain by Precambrian formations ranging in age from Keewatin to Keweenawan. Several small veins carrying cobalt minerals were discovered a number of years ago. Keewatin greenstones and the Cobalt sedimentary formations are cut by extensive masses of Nipissing diabase. In prospecting for silver attention should be directed to the margins of the diabase and to the Cobalt and Keewatin rocks in the vicinity of the diabase intrusions.

Miscellaneous.—A deposit of china clay on the east bank of the Mattagami river, 60 miles north of the Canadian National railway, is claimed by H. Sydney Hancock, Jr.,[6] to be of great size, of good grade similar to the Cornish kaolins and mixed with quartz sand that is practically pure silica.

Attention is called by Wyatt Malcolm[1] to the high calcium content of the limestones exposed on Abitibi and Mattagami rivers, in northern Ontario. As very little limestone is found in northern Ontario and Quebec, these deposits, when rendered accessible by the Temiskaming and Northern Ontario railway, may prove of great economic value.

The occurrence of lepidolite, a lithium-bearing mica in pegmatite, 10 miles northeast of Point du Bois, Manitoba, is described by Dr. J. F. Wright[1]. Other lithium-bearing minerals such as spodumene and montebrasite are also found.

The salt deposit of Malagash has been made the subject of further investigations. Dr. H. V. Ellsworth[1], after presenting the results of numerous chemical analyses of samples from different parts of the deposit, discusses the possible origin of the salt and submits certain economic considerations.